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ABSTRACT

Sixth-grade students were subjects in a study to determine whether they possessed a repertoire of situational language in which registers or speech styles were differentiated by language use. A methodology was developed to elicit and describe children's language in different social settings that require different situational uses of language. Four task situations were designed to create situational contexts and to elicit situational language of either an intimate, casual, consultative, or formal nature. Findings were analyzed in several categories: subject matter maintenance and switching: nonlinguistic features of communication: lexical diversity: contractions, compactions and truncations: colloquial and standard forms of "yes": lexical density: lexical content words: grammatical features: and extraneous linguistic material. The results of many of the analyses suggest that they are useful measures that differentiate language use in different sociolinguistic situations and that the interlinking of sociolinguistics and child language development can bring a new focus to the study of children's language. (HOD)

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THE OCCURRENCE AND ANALYSIS OF A REPERTOIRE OF SITUATIONAL LANGUAGE IN GRADE SIX CHILDREN

Trevor J. Gambell

Sociolinguistics examines the interaction between the two aspects of human behaviour: use of language, and the social organization of behaviour (Fishman, 1972). Language has evolved in the service of social functions, so that language has functions which can be linked with sociological correlates. We may expect to take account of social factors in explaining the nature of language (Halliday, 1973).

A sociolinguistic approach to the study of children's language would seem to be most appropriate. Halliday (1969) found that children employ language to fulfil various functions in their dealing with the world and others. Tough (1976) has appraised children's use of language, and has also focused on their social use of talk. It is clear from such studies that so much of children's language use occurs in situations where children interact socially with others. Of Halliday's (1969) seven language functions only one, the personal function, might be in some instances a nonsocial context of language use. Likewise with the classification of the uses of language developed by Tough (1976) the self-maintaining use is only one of the seven categories, and even it involves language in social contexts.

As children use language to undertake a variety of functions, almost all of them within a social context, they develop and practise a variety of speech styles. Speech styles are not equivalent to language functions though speech styles are likely to develop as a result of language use for a variety of purposes, and in different social contexts.

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But there has been very little research into the speech styles of children. Jensen (1973) studied the "casual" and "careful" oral language styles of superior and average fifth grade boys and girls, and found that language style proved to be a differentiating factor more often than did either ability or sex. Of the research done the majority has either been interested in teacher - pupil interaction, or has focused on a specific, narrowly-defined variable and neglected the vital interactional components of language events which would allow a range or variation of speech styles.

The writings on speech styles and registers are largely theoretical. Literary critics and analysts have long explored the use of style, called stylistics, in literature and written language, and have come up with several models of stylistics. While these models are not immediately applicable to oral language usage, they do suggest the types of speech styles we might expect adults, and children from the late elementary school years onwards, to have developed and to employ given certain social contexts of usage. In sociolinguistics, then, there is a need to find linguistic and social situations to match speech styles. Once this linguistic and situational or contextual matching has been made it might be possible to predict language usage with some confidence. A problem is to decide at which elementary school age or grade level to begin looking for linguistic and situational, that is, sociolinguistic, features to match speech styles. By the sixth grade children can be expected to have developed a casual and careful speech style.

PURPOSE

In order that a child be able to participate successfully in a variety of social situations he must be able to adapt his language to the context of situation which comprises the particular social setting. The ability to achieve this multifaceted use of language is achieved through the acquisition and development of a register or speech styles.

In order to study children's speech styles in the school setting it is necessary to regard the classroom as the major setting of language use. The classroom is both an institutional setting and a social setting, and if the researcher is to take these settings into account when studying children's behaviour then an appropriate methodology is required. More specifically, if we as educators consider the development of language concurrent with the development of the child as a social being, then a sociolinguistic approach to language study provides the most appropriate research model.

This study attempts to develop a methodology for both eliciting and describing children's language in different social settings, requiring different users and different situational uses of language. Such a methodology combines elements of both an observational study, where sociolinguistic behaviour is observed and recorded, and experimental research where variables are controlled and others manipulated. In this study the dependent variable is simply described as oral language production.

The study also aims to develop, from the literature and from observation, various systems for both recording and analyzing the oral language of children, where this language is generated in various

settings determined by sociolinguistic factors, notably speech styles and degree of formality of language use.

The main purpose of the study is to determine whether children at the sixth grade level do possess a repertoire of situational language where registers or speech styles are differentiated by their use of language. If so there are grounds for further study, and in the longer term, implications for teaching the language arts, for testing children's language, and for diagnosing language "deficits" in the elementary school.

The study is in large measure an exploratory one, which is best approached using several approaches to research. In summary the purposes are twofold: first, to develop a research model and a methodology for sociolinguistic research, and second, to implement a study of children's speech styles based on the model and methodology developed by involving children in contexts of situation, collecting oral language samples, then analyzing and describing the data.

QUESTIONS TO BE ANSWERED

Since research hypotheses are neither appropriate nor testable in this study, questions are posed to be answered through analyses of the data. They will be answered by the most revealing means which at times might be quantitative-descriptive, at other times descriptive.

1. Do the children in the study have a repertoire of speech styles which are differentiated by the nature of language used in different social situations?
2. Is the use of a variety of social situations and different contexts of situation a promising method of designing language tasks to evoke children's oral language?

3. Are measures of lexical diversity and lexical density capable of differentiating and evaluating the situational language uses of the children in the study?

4. Is an analysis of abbreviated language forms (contractions, compactions, truncations, and the colloquial "yes") capable of differentiating and evaluating the situational language uses of the children in the study?

5. Is feedback of both a linguistic and nonlinguistic nature capable of differentiating and evaluating the situational language uses of the children in the study?

6. Are syntactic measures capable of differentiating and evaluating the situational language uses of the children in the study?

7. Is the study of extraneous linguistic material capable of differentiating and evaluating the situational language uses of the children in the study?

8. Is the situational categorization a valuable method for describing the sociolinguistic setting of the children in the study, and are there implications for elementary language arts instruction?

9. Is the methodology employed in the study a fruitful one for a sociolinguistic description of children's language, and could it be further employed in describing the possible repertoires of children's speech styles?

DESIGNING A MODEL AND A METHODOLOGY

After an extensive and lengthy review of the literature pertaining to sociolinguistics, language functions, speech styles and register, and stylistics, a situational categorization was designed from

which task situations were developed, and language and situational analyses selected or created. The model to be used is a synthesis and refining of those schemes of stylistic and functional identification as described by Enkvist et al. (1964, 86-89), Halliday (1974, 34-36, 48-53), Halliday et al. (1972, 153-155), Doughty et al. (1972, Chapter 11), Ellis (1966, 79-95), and Joos (1967). In parentheses are the analyses to be used. These analyses will be described in detail later in this article.

Field of Discourse:

1. Subject matter of the talk, and the content of what is said. (Subject Matter Analysis)
2. The institutional setting in which the language occurs.
3. The whole activity of the speaker(s) and/or participant(s) in the setting; what they/he/she are/is engaged in doing. The nonlinguistic features of communication. (Nonlinguistic Features Analysis)
4. Distinguishing vocabulary items.

   The field of discourse largely determines the choice of vocabulary. (Lexical Diversity Analysis: Type-Token Ratio; Contractions, Compactions and Truncations; Colloquial and Standard Forms of "Yes")

Mode of Discourse:

1. Channel of communication adopted: spoken, written, graphic, etc.
2. Function language is being used for: to persuade, soothe, sell, control, explain, inform, teach, argue, etc.
3. Degree of spontaneity or nonspontaneity/preparedness.
4. Lexical density.

   Mode of discourse largely determines the density of the lexical content. (Lexical Density Analysis)

5. Grammatical features and patterns.

(C-unit Analysis; Elaboration of C-unit Analysis; Lexical Verb Analysis. Extraneous Linguistic Material to be treated separately).

Style/Tenor of Discourse:

1. Degree of formality: intimate, casual, consultative, formal.

This dimension must be seen as a continuum, with no points between the two poles of extreme formality and extreme informality capable of being defined with any precision.

2. Role-relationships between participants:

a. permanence of the relationship

b. degree of emotional charge

Broad role-relationships can be defined by pupil/pupil, child/child in peer group, casual acquaintances, etc.

3. Nature of feedback:

a. linguistic dominance (Linguistic Dominance Analysis)

b. nonlinguistic features of communication (Nonlinguistic Features Analysis: Functional and Nonfunctional)

PROCEDURES

Subjects

The children used in the study did not comprise a sample drawn from a population of children; rather they were selected by a classroom teacher and the researcher. A teacher of a sixth grade classroom in a large suburban community adjacent to a western Canadian city was asked to identify dyads of the sex. Criteria were that the children knew each other very well, lived close to each other, played together outside of

school hours, and worked together on class projects. Pairs also had to be linguistically competent and fluent speakers, with at least average scholastic ability. The researcher selected the final two pairs after interviewing each pair to gauge degree of intimacy, willingness to talk and willingness to cooperate. The pair of each sex became the four key subjects of the study. They formed the core of, and participated in, each task situation.

The same teacher was then asked to select subjects to add to the pairs for the second and third task situations. Criteria used were that these additional subjects be friends of the key subjects who play together in the school playground, work together in class projects, and play sports and games together in school or neighbourhood activities. The friends had also to be on friendly terms with each other. To validate the teacher choices the researcher conducted a sociometric survey among all the children in the sixth grade class. This survey validated with no discrepancy whatsover the teacher choices of both dyads and friends of dyads.

In the third task situation a boy and girl from another sixth grade class were added to the group, and in the fourth task situation approximately half of the original sixth grade classroom participated.

Task Situations

Four task situations were designed around the first four of the five speech styles identified by Joos (1960,1967). The four task situations were designed to create a context of situation and to elicit situational language of either an intimate, casual, consultative, or

formal nature, to use the terms Joos chose for the four speech styles. The final speech style, frozen, was abandoned because it is the style of written language.

Each task description describes the subjects, directions given subjects, preparation required for the task by subjects, the situational aspect of the language task, and the methodology for date collection.

The task situations incorporate four scales of language determinacy, and the fourth can be considered as the social distance between addressor and addressee. The addressee in all circumstances, except for the intimate, should be considered in the plural. Diagrammatically the four scales can be shown thus:

SPEECH STYLE

intimate — casual — consultative — formal

GROUP SIZE

dyadic — large

ADDRESSEE/ADDRESSOR RELATIONSHIP

intimate — formal

ADDRESSEE/ADDRESSOR DISTANTIATION

têté-a-têté — distant

The correspondence between the various scales does not always hold true, and the design of the task situations reflects this. An intimate addressee/addressor relationship can hold within a large group,

but one would not necessarily expect as a matter of course that an intimate speech style would be employed. The design of Task 4 will demonstrate this. Likewise, dyads might converse in a formal style.

Task 1: Intimate Situation

Subjects: two groups, dyads. (1) G_1 G_2 (2) B_1 B_2

Preparation for Task: none. Spontaneity is a requisite for the task.

Task: The two key subjects (dyad) were asked to talk about something enjoyable and exciting that they did together, or maybe something that they are planning to do together. It might be about sports, games, hobbies or a special interest.

Situational Aspect: dyadic, in a small room seated together at a round table.

Methodology for Data Collection: (1) audio recording; recorder behind screen.

(2) video recording using remote camera placement with telephoto lens. Equipment screened.

Task 2: Casual Situation

Subjects: two groups of four subjects each.

(1) G_1 G_2 and B_3 G_3 who are friends of either G_1, G_2, or both.

(2) B_1 B_2 and B_4 G_4 who are friends of either B_1, B_2, or both.

Preparation for Task: none. Spontaneity of oral language was important.

Task: each group was invited to talk about a sport, or game, or hobby or special interest that the group did together that was interesting and exciting, or to talk about something the group was planning to do or play soon.

Situational Aspect: group of four, in a conference room, seated at a round table.

Methodology for Data Collection: as for Task 1.

Task 3: Consultative Situation

Subjects: two groups with six subjects per group.

(1) G_1, G_2, B_3, G_3 and B_5, G_5 who are children of the same age but from another Grade 6 class in the school.

(2) B_1, B_2, B_4, G_4 and B_6, G_6 who are children of the same age but from another Grade 6 class in the school.

Preparation for Task: on the day before each group member was informed that he/she would be getting together to plan a sports event for his/her grade, and that some children from another grade six class had been invited along to share their ideas. No formal or written preparation was asked for.

Task: the six pupils were reminded that the Commonwealth Games were being held in their city this coming summer. "Let's say that all grade sixes in _____ School are going to have a Commonwealth Games afternoon. You are the group to set it up. You'll probably want to talk about how you would plan it, what events you would have, and who you would need to help you."

Situational Aspect: group of six, in a conference room, seated at a trapezoid table so that all members can see each other.

Methodology for Data Collection: as for previous tasks.

Task 4: Formal Situation

Subjects: four individual key subjects to present to a mixed group of twelve peers. (1) G_1 (2) B_1 (3) G_2 (4) B_2

Preparation for Task: the task was assigned one week before the presentation date. Each key subject chose a topic in consultation with the researcher. Adequate in-school preparation time was given.

Task: each key subject was asked to prepare and give an interesting talk about a particular sport, game, activity or special interest of personal commitment. Subjects were told they could use pictures, books, materials, photos etc. to use and show. They were also asked to give the audience a chance to ask questions during and after their presentations.

Situational Aspect: single speaker standing at a desk, in front of a chalkboard, presenting to a group of twelve peers seated about ten feet away in two equal rows.

Methodology for Data Collection: (1) audio recording of both presentor and audience members; (2) video recording with mixed sound using two cameras - one on presentor, and one on audience.

Pilot Study

Two months before the main study a pilot study was conducted to determine the efficacy of the tasks, including the subject matter, and to test out the effectiveness of the recording arrangements. Since each task situation is different the pilot study was conducted as if it were the main study, Many technical aspects were refined at this time. It was found also that the optimum time for the first three tasks was fifteen to seventeen minutes. From data collected at the time the researcher developed a procedure and key for transcribing the audiotapes, and for coding nonlinguistic features from the videotapes.

MEASURES

For each task situation the same four key subjects are involved, though in three of the task situations additional subjects were introduced to the language situation in accordance with the four language determinancy scales described. The detailed analyses of the oral language of the same key subjects across all four task situations allows a controlled comparison of situational language use according to the context of situation.

It is necessary to take into account the situational aspects of each task in order to account for possible differences in language usage. The researcher considers it essential to employ several different types of analysis so as to account for all major aspects of the context of situation. Analysis focuses on, but cannot be restricted to, the language samples of the four key subjects in each task situation.

A global overview of the task situations from a sociolinguistic perspective will yield information about the context of situation pertaining to each of the tasks. Within this overview all of the detailed and systematic parts of the discourse analyses can be recognized. A discussion of the components of the situational categorization of the language tasks sets the individual analyses in perspective. All components of the context of situation are accounted for in the design of the study, the development of the task situations, and in the analysis of the linguistic and nonlinguistic features of communication.

Field of Discourse:

1. The subject matter, broad though it is, remains the same across the four tasks. In some sense the subject matter is a predetermined

variable, with the directions (sports, games, hobbies and special interests) broad enough so that the subject matter would fit comfortably into each task situation.

In order to determine the particular subject topics chosen by the speakers, and how subject topics were sustained and switched during the course of the task situation, each task situation was carefully analyzed. From the language context it was possible to classify the subject matter base as a shared personal experience, school experience, an individual experience, a shared personal opinion, planning experience, shared humour, and several minor categories. Groupings of subject matter were made, as well as groupings of experiential bases. It was hoped that patterns would appear that showed predominance of subject topics and experiential bases. This system of analysis was validated by two experts in elementary language arts.

2. The institutional setting is in all cases the school which all subjects attended. This variable remains constant.
3. The activity(ies) of the speaker(s) and participant(s) in each task situation was recorded and synchronized with the spoken language. In the transcripts it appears as nonlinguistic features. The Nonlinguistic Features Analysis deals with both functional and non-functional aspects of these features.

Initial attempts at quantifying particular instances of non-linguistic behaviour were abandoned as it became apparent that individual traits and behaviour patterns, as well as personality factors, played a major part in the types of nonlinguistic features used by subjects. The system is a descriptive one. It was validated by two researchers with considerable experience in the videotaping of children and coding from such videotapes.

4. The type of vocabulary expected to be used by the key subjects is constrained to some extent by the subject matter, which is standardized across tasks. Vocabulary items, both in range and type, should be different across tasks, and the Lexical Diversity Analysis measured by the Type-Token Ratio is an accepted measure of vocabulary breadth (Fairbanks, 1944; Loban, 1963; Horowitz & Newman, 1964; Walker, 1973). It is a measure of the diversity of vocabulary and is the ratio between the number of different words used by a subject (types) and the total number of words in a sample (tokens). Types of vocabulary used is measured in a restricted manner by the Analysis of Contractions (e.g.s. couldn't, can't, ain't), Compactions (e.g.s gonna, gotta, hafta) and Truncations (e.g.s. flyin', 'cos, s'posed). The degree of subject matter switching would make deeper analysis of types of vocabulary items too open to competing variables.

Mode of Discourse:

1. The channel of communication is a controlled variable, and is oral language.
2. The function that language is being used for changes even within tasks. In the first three task situations language functions to recall, reconstruct and share experiences, to plan and to persuade. In the fourth task situation the dominant function is to explain, inform and teach. A subanalysis looks at language functions in relation to subject matter switching and maintenance.
3. The degree of spontaneity was controlled to a large extent as necessary for the functioning of each task. The directions given subjects for each task situation describe the degree of spontaneity/preparedness.

4. Lexical density is measured by the Lexical Density Analysis scheme. It is the proportion of content words (nouns, single word adjectivals, verbs, single word adverbials) to words as a whole. The lexical density of language used by key subjects is compared across task situations.

5. Grammatical features and patterns are analyzed via several different methods for each key subject across task situations. The C-unit Analysis (Loban, 1976) is the basic measure, followed by the Elaboration of C-units Analysis (the three major types of clauses, and prepositional phrases). Lexical Verb Analysis considers the use of verbs through application of the type-token ratio, and auxiliary verb forms are also analyzed.

Style/Tenor of Discourse:

1. The degree of formality is a controlled variable, being the one through which the task situations are designed and presented. In methodological terms it is the dependent variable whilst all of the methods of analysis to be applied are independent variables. Four levels of formality translate into the four task situations of intimate, casual, consultative, and formal.

2. Broad role-relationships in the study can be defined as peer/peer. Although the permanence of the relationships remains constant for the key subjects across task situations, different subjects added to each task situation change the role-relationships within that group. Role-relationships were controlled through the criteria for including subjects in each task situation.

3. The nature of feedback is analyzed in two ways. Linguistic dominance (Linguistic Dominance Anslysis) gives an account of the degree of

linguistic presence of each key subject. Nonlinguistic features of communication (Nonlinguistic Features Analysis) describes how nonverbal communication operates between participants in a sociolinguistic setting.

The analysis and description of the data is undertaken in the same order as the analyses are described in this situational categorization. In some circumstances much more understanding can be gained by looking at several analyses side-by-side, and using one to complement and add power to another. Eleven major types of analysis were performed on the data provided by the key subjects in each task situation.

RESULTS AND DISCUSSION

The results of the analyses will be discussed in the light of their power to discriminate between task situations. Some of the analyses are of quantitative data, and in such cases ratios, percentages and graphs are used. In some cases it has been necessary to use frequencies of feature occurrence for individual key subjects as well as pooled frequency data (all four key subjects). Other analyses, such as that of nonlinguistic features, are reported descriptively rather than numerically.

Subjective Analyses

Subject Matter Maintenance and Switching

The content of the discourse in each task situation was analyzed to identify the subject matter topics which the children focused upon. The subject topics were then further analyzed to determine what topics were maintained, and to what extent switching from one topic to another occurred. Topics were also clustered around themes such as games/sports/

activities in school, social events in school, and special interests. A secondary analysis of subject topics was in terms of the experiential bases from which the topics evolved.

Subject matter was more diverse and greater in number of topics in the intimate situation, and decreased across task situations to the one maintained topic in the formal situation. Subject topic was fully maintained in the consultative situation also, but not so in the casual and intimate situations. Shared personal experiences dominated the experiential bases of informal situations while there was greater use of individual and planning experiences in more formal situations. The girl dyad groups tended to focus more on school events and social events outside of school while the boys tended to prefer individual interests, hobbies and sports activities. Television shows and current movies held the interest of both groups in casual situations. In larger groups and in more formal situations a common experiential base was usually sought, and school-related events or the mass media usually made up this base.

Humour was used to maintain some degree of informality in formal situations, but in a low-keyed manner. Humour was used by the boy dyad groups to foster peer group relationships. In the intimate situation humour was covert, and humorous experiences were instantly shared without overt verbalization.

In the two more formal situations subject maintenance was total or present to a much greater extent than it was in informal situations. In more formal situations subject topics or subtopics were sequenced to the point of total maintenance in the formal situation. With this progression to total subject maintenance there was also a shift from shared personal experiences in the two informal situations to individual and

planning experiences, and humorous episodes, in the formal situations.

Nonlinguistic Features of Communication

This analysis was undertaken in order to capture the meaning and information that is conveyed in situations but which is not available through transcriptions of language. Each nonlinguistic feature was identified as either functional or nonfunctional. Functional features fulfil a semantic function in that they add meaning to a linguistic utterance which is synchronous with the nonlinguistic feature, or they supply the total meaning when there is no linguistic utterance. Functional features form an integral part of the utterance or of the communication. They are an adjunct to, or a substitute for, words. Major categories developed include positive and negative eye contact, eyebrow movement, facial expression, gestures with hands and arms to signify objects and incidents, gestures with head movement, gestures to suggest movement and actions of people, gestures to gain the attention of others in the group, torso gestures, foot and leg movement, and laughter and grinning.

Nonfunctional features do not offer any recognizable meaning and are probably not used to convey meaning. They are not necessarily synchronized with any linguistic utterance, and are quite likely not even perceived by the user or by others. Many nonfunctional features are made up of nonconscious actions, and may be nervous or habitual actions. Some may function in the same way as do filler words and phrases. Personality characteristics play a big part in the adoption and use of nonfunctional, nonlinguistic features of communication. Major categories developed are negative eye contact, movements of hands and arms, movements of feet and legs, and torso movements.

In the intimate situation eye contact was a dominant feature, and gestures played an important part, particularly those arm and hand gestures which signified objects and events. In all cases the use of gestures was linked very much with subject topics. This is consonant with the shared personal experiential base where gestures have an immediate meaning for the other person in the dyad. Gestures to gain attention appeared in the casual situation, as did hands and arm gestures to signify objects and events, and the movements and actions of people. In the consultative situation gestures were used not only to gain attention but also to emphasize points. Eye contact was made primarily when one person was addressing another. In the formal situation eye contact was used very little, and gestures of all types were used sparingly. The conveyance of meaning in the formal situation rested almost exclusively on the linguistic utterances.

Qualitative - Descriptive Analyses

The limited number of subjects and the nature of the data upon which the analyses are based do not lend themselves to rigorous statistical analyses. Therefore the researcher must decide what will determine the true and meaningful differences in magnitude. Sequences, patterns and trends in the data at times form the basis for analytical discussion. Use is made of meaningful differences, sequences, patterns and trends to describe phenomena rather than to draw firm conclusions from the data.

Distinguishing Vocabulary Items

a. Lexical Diversity: Type-Token Ratio

The type-token ratio (TTR) is a measure of lexical diversity and is one useful way of distinguishing vocabulary usage in different task situations. Since the ratio looks at all lexical items in 100-word units this measure does not single out lexical items. Similar results to those in the Jensen (1973) study were found: the casual language styles are characterized by a considerably more diversified choice of words than are the more formal language styles. Interesting patterns occur when the means for dyads are considered (Table 1). The boy dyad shows a higher TTR mean than the girl dyad especially in the intimate (boys .70, girls .62) and consultative (boys .72, girls .60) situations. Rather than a specific sex difference, the intimate situation difference might be explained by the subject matter choice of the two groups. The girls chose to discuss general social events in and out of school. The boys chose particular hobbies and interests where information and facts were prominent. The tendency towards greater subject matter specificity might also explain the higher TTR mean for the boys' group in the consultative situation.

An interesting finding is that the formal situation, with its longer utterances and monologue predominance, produced TTR means which were no higher than those for the casual situation. This is partially explainable by the need for careful description in the formal situation, and the degree of repetitiveness that goes with careful description in a linguistic situation where shared background information is minimal.
In summary there was in general greater lexical diversity in the casual situation and in the formal situation, but there tended to be lesser lexical diversity in the intimate situation and in the consulatative situation.

Table 1

MEANS OF COMBINED TYPE-TOKEN RATIO SCORES FOR EACH TASK SITUATION BY GROUP AND BY COMBINED GROUPS

				Task 4		
	Task 1	Task 2	Task 3	Talk Segment	Question-Answer Segment	Combined Segments
Group 1 Girl Dyad	.62	.67	.60	.65	.67	.66
Group 2 Boy Dyad	.70	.67	.72	.68	.67	.67
Combined Groups	.66	.67	.66	.66	.67	.67

b. Contractions, Compactions and Truncations

A study of these word forms as used by key subjects provides a measure of lexical uniqueness in the different task situations, which is one aspect of distinguishing vocabulary items. Contractions are made up of the usual contracted forms such as "couldn't", "can't", "weren't", "he's", etc plus lesser-used varieties such as "picture's" for "picture is", "what'd", "they'd", etc. Compactions are made up of two words compacted into one in a colloquial type of usage, for example, "wanna", "gonna", "gotta". Truncations result from the deletion or substitution of initial, medial or final sounds, for example, substituting the final "in" for "ing" (laughin'), also "an'", "'em", "prob'ly". Truncations are also known as reduced forms. Ratios of occurrence of these three forms in relation to the lexical word count were computed, where the lexical word count is the count of all words which form parts of C-units from which extraneous linguistic material is omitted.

The measure of most interest is the ratio showing the total number (of contractions, compactions or truncations) to the lexical word count of all four key subjects (Table 2). This ratio of Total/LWC for contractions shows an increase from one task situation to the other, with the intimate situation having the lowest ratio (0.033) and the formal situation having the highest (0.052). An increase in the Total/LWC ratio suggests that relatively more contractions are being used in more formal situations. Superficially this might suggest that the use of contractions signals language formality, but there are other explanations. First, contractions are acceptable language shortcuts, and most are no longer considered as shortcuts but as standard language items. Moreover,

Table 2

POOLED FREQUENCIES, TYPES AND RATIOS OF CONTRACTIONS, COMPACTIONS AND TRUNCATIONS FOR ALL KEY SUBJECTS PER TASK SITUATION

	Contractions				Compactions				Truncations			
	Total Number	Number of Types	Ratio Types/ Total	Ratio Total/ LWC*	Total Number	Number of Types	Ratio Types/ Total	Ratio Total/ LWC*	Total Number	Number of Types	Ratio Types/ Total	Ratio Total/ LWC*
Task 1	173	86	0.50	.033	16	5	0.31	.003	66	47	0.71	.013
Task 2	106	59	0.56	.041	6	6	1.00	.002	42	22	0.52	.016
Task 3	80	35	0.44	.048	11	3	0.27	.006	17	14	0.82	.010
Task 4	118	50	0.42	.052	0	0	0.00	.000	23	10	0.43	.010

* LWC = Lexical Word Count

the full linguistic form of "isn't" or "can't" could be considered to be pedantic and affected usage in any but the most formal situation. An analysis of ratios of types of contractions to total contractions used suggests that in the formal situation a lesser variety of contractions was being used. The same standard contractions were b ; used several times, while there was decreased tendency toward the use of certain colloquial contractions such as "this'd" and "ain't".

The increased use of contractions was associated with decreased use of compactions and truncations as the degree of formality increased. It is this researcher's opinion that compactions and truncations represent less acceptable use of langage, and this is certainly true in more formal situations. While such use of language is tolerated and used without question in informal situations such usage in formal situations would be unacceptable. The children in this study seemed on nonconsciously recognize these fine degrees of usage.

The ratios for compactions provide interesting data. The girls used no compactions at all, while the boys only dropped such use in the formal situation. For the boys there was a tendency towards a decline in the use of compactions as the level of formality increased. The ratios data for truncations show a decline with the girls as the level of formality increased. The girls used fewer truncations when a more formal style of language was considered appropriate. This finding is in keeping with the acceptability of phonological correctness and attention in different situations. The boys paid less heed to this principle of acceptability. There were individual differences in the use of contractions, compactions and truncations across the four task situations.

c. Colloquial and Standard Forms of "Yes."

Along the lines of examination of contrasting pairs (Rainey et al., 1969), it was decided to contrast and compare the use of two forms of "yes". The two forms have been classified as Colloquial ("yeah", "yea" and "yep") and Standard ("yes"). An analysis of these forms gives another approach to the study of distinguishing vocabulary items. Frequency counts were made of both forms for each key subject in each task situation. Each frequency count was also shown as a ratio of frequency to lexical word count, which gave a reliable and comparative measure of its relative use.

With all but one of the key subjects the use of the colloquial form decreased from Task 1 to 2 and from 3 to 4, with an overall decrease across task situations with the increase in level of formality. The use of the standard form is as might be expected. It is hardly used, if at all, in the informal situations, but all subjects except one showed an increase in use form Task 3 to 4. For these children the standard form in most situations is the informal (colloquial) one. The children seemed to naturally use the less formal forms in all situations except the formal, where "yes" was considered the appropriate form.

There are other contrasting pairs which can be compared, but the problem is to find their occurrence in a variety of task situations by the same speaker. The use of certain informal forms that do not form contrasting pairs, such as "okay", "good", "right", etc. can also be considered. These three words were also counted for each key subject in each task situation, and the trend was clearly one where there was greater use in the informal situations, decreasing to little or no use in the formal situation. This trend was more pronounced with the girls

than with the boys.

Lexical Density

Density of lexical content is largely determined by the mode of discourse, with lexical density being only one of the features of discourse attributed to mode. The lexical densities of the text of each key subject in each of the four task situations were computed, and comparisons made across task situations. The lexical word count and the lexical content word count were the two frequency counts used in computing lexical densities.

The pooled frequencies in Table 3 (four key subjects together) show an increase in lexical density from the casual to the formal situation. The largest differences appear between tasks 1 (0.439) and 2 (0.458), and 3 (0.460) and 4 (0.496). Of much interest is the close range of ratios in Task 3 for all key subjects (0.432. 0.457, 0.460, 0.464). Given data for more subjects it might be hypothesized that the 0.460 ratio approximates a norm for the cunsultative situation. Except for one ratio, in each instance the ranges in the Task 1 and 2 situations are narrow, suggesting the possibility of norms being established with more data.

The measure of lexical density may be a useful one in distinguishing between levels of formality in children's oral language, but further study is required. The trend is towards a lower density of content words in informal situations and a higher density in formal situations. The findings here are in agreement with Ure (1969, 1971) who found that lexical density was a valuable register differentiation measure. The results also substantiate the theoretical construct postu-

Table 3

RATIOS FOR LEXICAL DENSITY AND LEXICAL CONTENT WORD ANALYSIS FOR KEY SUBJECTS PER TASK SITUATION

	Task	Lexical Density Ratio	Ratio Nouns to Lexical Content Words	Ratio Nouns to All Words	Ratio Adjectivals to Nouns	Ratio Verbs to Lexical Content Words	Ratio Verbs to All Words	Ratio Adverbials to Verbs
Pooled	1	.439	.323	.142	.356	.411	.181	.367
	2	.458	.331	.151	.476	.410	.188	.248
	3	.460	.351	.161	.734	.336	.155	.165
	4	.496	.372	.184	.544	.338	.168	.258
M.	1	.467	.281	.131	.280	.420	.196	.524
	2	.435	.335	.146	.431	.405	.176	.287
	3	.464	.343	.159	.926	.297	.138	.143
	4	.495	.352	.174	.629	.271	.161	.313
Ba.	1	.417	.305	.127	.367	.420	.175	.388
	2	.427	.365	.156	.429	.411	.176	.165
	3	.432	.366	.158	.867	.244	.105	.300
	4	.558	.449	.250	.488	.251	.140	.324
C.	1	.449	.343	.154	.395	.411	.185	.267
	2	.451	.316	.142	.440	.421	.190	.295
	3	.461	.349	.161	.642	.369	.170	.158
	4	.446	.337	.150	.400	.476	.212	.111
By.	1	.446	.365	.163	.358	.391	.176	.290
	2	.515	.329	.169	.598	.397	.204	.197
	3	.457	.406	.186	.538	.281	.129	.333
	4	.476	.344	.164	.600	.349	.166	.288

lated by Halliday (1974) where register, as part of a speaker's communicative competence, results in his knowing how to distribute lexical items in a text according to different kinds of language use.

Lexical Content Words Analysis

Although the lexical density measure proved useful it was decided to deepen the analysis of content words by computing ratios which would show the relationship of nouns, adjectives, verbs and adverbs to all content words, to all words in a text, and to each other. These analyses yielded some useful information and showed directions for possible future types of lexical content analysis.

Only the ratios which used nouns proved useful; none of the ratios using verbs resulted in any identification of pattern or trend. The ratios of nouns to lexical content words showed a consistent increase from one task situation to another as the level of formality went from informal to formal. (Pooled data for Tasks 1 to 4 are 0.323, 0.331, 0.351, 0.372). It seems that as more lexical items are used in more formal situations, which the lexical density measure showed, then more nouns were also used.

Grammatical Features

Grammatical features and patterns make up this detailed system of analysis. Along with lexical density and lexical content words analysis, they are part of the mode of discourse. Grammatical features and patterns consist of three types of analysis: C-unit analysis, then follows a study of elaboration of C-units comprising clauses and phrases, and last is lexical verb analysis.

a. C-unit Analysis

Although the C-unit has not been used in register studies it is a validated and proven measure of both oral and written language of elementary school children (Loban, 1976; O'Donnell, 1976). The first question to be asked is whether or not mean C-unit length differentiates between the four language situations. This cannot be answered definitively, but the trends displayed in Table 4 suggest that as the situation becomes more formal the mean C-unit length increases. The trend is apparent in the pooled data though a discrepancy occurs in the Task 2 situation.

Examination of the means across task situations for the two key subjects identified as M. and C. reveals a trend. Mean C-unit length does differentiate consistently between task situations, and as the language situation became more formal the children used longer C-units. They were more careful in, and cognizant of, their sentence structuring in order to make their language as clear and comprehensible as possible. Although longer C-units have generally been considered a sign of more mature use of language, here they suggest a more careful, deliberate and formal use of language. In this instance maturity is not a factor because the language samples represent language use at only one point in time, that is, they do not represent developmental stages.

The inconsistent means across task situations for the other two key subjects (designated Ba. and By.) point out a problem in register studies, particularly with children. This problem deals with the consistency of language samples in different language situations. Ba. was reticent in the Task 3 situation, and this reticence resulted in the lowest C-unit mean of all. Conversely, Ba. was loquacious in the Task 1

Table 4

FREQUENCIES AND MEANS FOR C-UNITS

	Total Number of C-units in Transcript				Total Number of Words in C-units (C-unit Word Count)				Average Number of Words per C-unit			
	Task 1	Task 2	Task 3	Task 4	Task 1	Task 2	Task 3	Task 4	Task 1	Task 2	Task 3	Task 4
M.	205	92	81	109	1,003	501	529	939	4.893	5.446	6.531	8.615 (8.820)*
Ba.	314	96	23	70	2,048	461	110	528	6.522	4.802	4.783	7.543 (13.944)
C.	238	199	171	74	1,197	1,116	1,072	500	5.029	5.608	6.269	6.757 (8.488)
By.	231	130	24	71	1,275	624	74	430	5.519	4.800	3.083	6.056 (10.417)
Pooled	988	517	299	324	5,523	2,702	1,785	2,397	5.590	5.226	5.970	7.398

* Figures in parentheses are means for talk segment.

situation, resulting in the highest C-unit mean length outside of the formal situation. The same tendency is noticeable in the results of By. The reticence and garrulity of Ba. and By. tended to produce language samples which gave results inconsistent with what could be expected from trends.

A comparison of C-unit lengths with those reported by Loban (1976,p.35) is of interest. At the grade six level, for both sexes, the high group (high in lnaguage ability) mean was 10.32, the random group was 9.82, and the low group produced an average of 8.57 words per C-unit. These figures of Loban were for oral language usage. When compared to the figures reported in this study (Table 4, range 3.083 to 13.944) the Loban figures seem high. However, when compared with the means for the talk segment of Task 4 (range 8.820 to 13.944) they are comparable. (The talk segment of Task 4 was the oral presentation by the key subject to the group of twelve peers. The question-answer segment followed the end of each presentation). It would appear that the means in the Loban study are for oral language in formal situations, and this conjecture is borne out by the procedures used to collect the oral language in the Loban study. Individual children were interviewed individually by an adult and the responses tape recorded. When determining measures of children's oral language use it is essential that the language situations be specified.

b. Elaboration of C-units

These analyses were broken down into the two components of clauses (noun, adjective, and adverb) and prepositional phrases. These analyses were able to differentiate only the formal situation while the other three situations were undifferentiated (Table 5). It is possible

Table 5

FREQUENCY COUNTS, MEANS AND PERCENTAGES OF DEPENDENT CLAUSES FOR KEY SUBJECTS PER TASK SITUATION

	Number of Dependent Clauses				Average Clause Length (in Words)				Average Number of Dependent Clauses per C-unit				Words in Dependent Clauses as a Percentage of Words in C-units			
	Task 1	Task 2	Task 3	Task 4	Task 1	Task 2	Task 3	Task 4	Task 1	Task 2	Task 3	Task 4	Task 1	Task 2	Task 3	Task 4
M.	20	5	3	38	5.55	7.60	4.67	6.05	0.10	0.05	0.04	0.35	11.07	7.58	2.65	24.50
Ba.	44	5	2	5	6.00	6.60	4.00	7.60	0.14	0.05	0.09	0.07	12.89	7.16	7.27	7.20
C.	11	25	12	17	5.73	5.76	6.50	5.35	0.05	0.13	0.07	0.23	5.26	12.90	7.28	18.20
By.	18	9	0	8	6.06	5.22	0.00	5.75	0.08	0.07	0.00	0.11	8.55	7.53	0.00	10.70
Pooled	93	44	17	68	5.88	5.95	5.88	5.96	0.09	0.09	0.06	0.21	9.90	9.70	5.60	16.90

that syntactically the children adopted two broad uses of oral language, one for conversation and discussion, the other for explanation and presentation in a monologue mode. Use of the former might account for the generally lower numbers obtained for the first three task situations, while use of the latter might account for the numbers obtained for the Task 4 situation. The separate measures of clauses and prepositional phrases suggest this type of explanation. A further suggestion is that the girls were more able to adapt their language use syntactically to fit the language situation than were the boys.

c. Lexical Verb Anslysis: Type-Token Ratio

This analysis of verbs was conducted after the analysis of verbs and adverbs in the lexical content words analysis failed to differentiate between task situations. The lexical verb analysis using the TTR allows another method of examining the use of verbs. This second approach did not reveal any trends in the use of verbs across task situations; not even the formal situation was differentiated.

Extraneous Linguistic Material

The presence of extraneous linguistic material (ELM) gives an indication of the degree of fluency of the user's speech in the particular speech situation. The presence of ELM is much more prevalent in spoken language than in written language; in fact, ELM is characteristic of all spoken language. The degree of presence varies from what we can expect as greater use in informal situations to lesser use in formal situations.

Four types of ELM were identified form the transcribed texts: Audible Pauses, Filler Words and Phrases, Repetitions, and Edit Mazes, also known as False Starts (Loban, 1963,1976; Hunt, 1965; Anderson, 1972;

Walker, 1973). Many comparisons of ELM occurrence with other measures were made. The means of ELM "words" per ELM occurrence were somewhat similar for the first three task situations, and the means for pooled subjects vary only by 0.08 (Table 6). This measure successfully differentiates the formal situation, but as with some previous analyses already described, the first three task situations appear to be undifferentiated. It may appear as if the children interpreted the language acceptability to be the same for any situation where they are talking among their peers. However, some measures have differentiated between task situations. Metalinguistically it is possible that children are overtly aware of the need to change their language style for a distinctly formal language situation, while all that is construed as less formal is treated as generally informal. The degrees of informality are less pronounced than are the differences between br dly informal and formal situations.

The most useful of the analyses undertaken for ELM is that of ELM occurrences as a percentage of C-units (Figure 1). The general tendency evident from these percentages for pooled subjects is an increase across situations from casual to formal, with a decrease from intimate to casual. For three of the four key subjects the greatest increase is between Tasks 3 and 4, so that the formal situation is clearly differentiated by this analysis. This is not to suggest that there was an increase in the use of ELM in the formal situation. Rather, the higher figures result from the fact that C-unit length was greatest in the formal situation, so that for a given quantity of language there were fewer C-units in the formal situation than in any of the other three task situations. Even so the percentages for ELM count to lexical word count

Table 6

EXTRANEOUS LINGUISTIC MATERIAL FREQUENCY COUNTS, OCCURRENCES AND MEANS FOR KEY SUBJECTS PER TASK SITUATION, AND KEY SUBJECTS POOLED

	Extraneous Linguistic Material Count				Extraneous Linguistic Material Occurrences				Average Number of ELM Words per Occurrence			
	Task 1	Task 2	Task 3	Task 4	Task 1	Task 2	Task 3	Task 4	Task 1	Task 2	Task 3	Task 4
M.	77	60	49	137	59	35	36	73	1.31	1.71	1.36	1.88
Ba.	295	56	12	111	169	37	7	44	1.75	1.51	1.71	2.52
C.	107	107	175	55	73	65	94	35	1.47	1.65	1.86	1.57
By.	142	39	2	31	70	24	2	22	2.03	1.63	1.00	1.41
Pooled	621	262	238	334	371	161	139	174	1.67	1.63	1.71	1.92

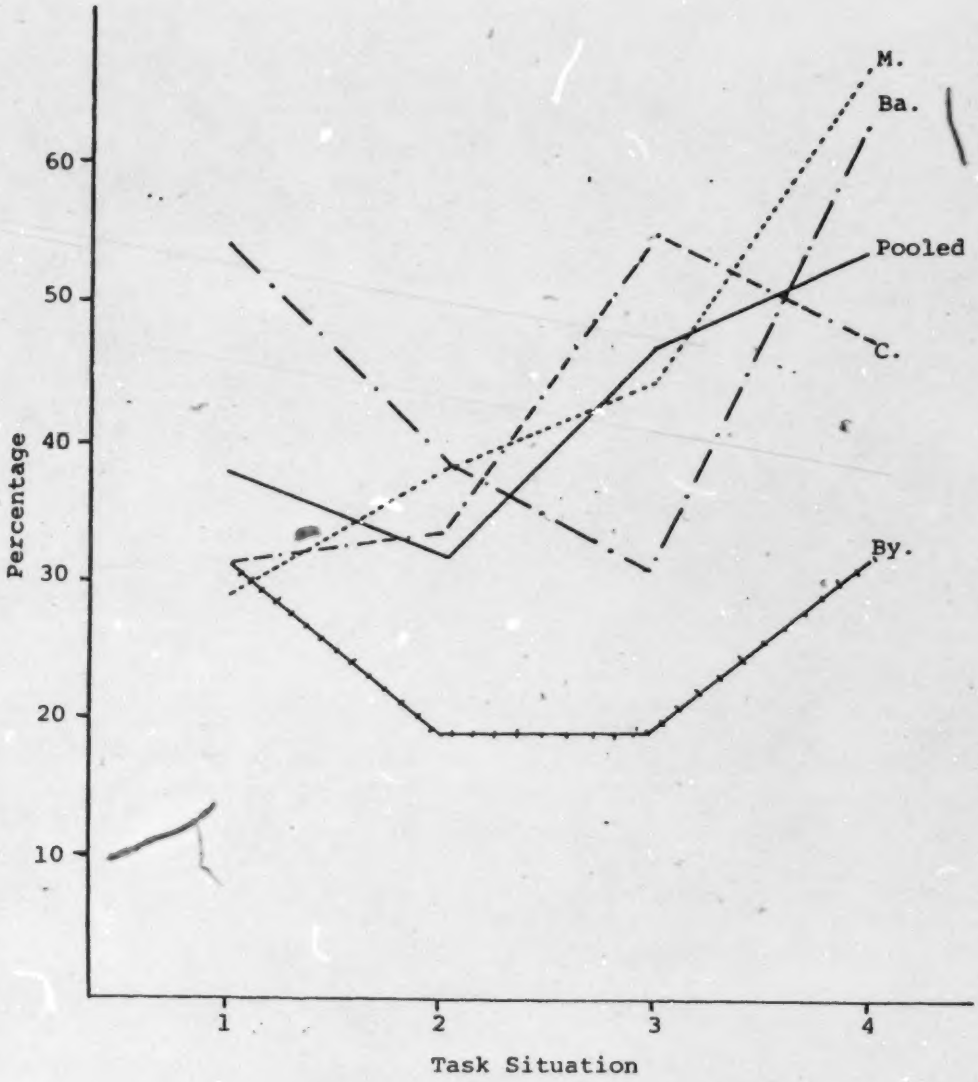

Figure 1

EXTRANEOUS LINGUISTIC MATERIAL OCCURRENCES EXPRESSED AS A PERCENTAGE OF NUMBER OF C-UNITS FOR INDIVIDUAL AND POOLED KEY SUBJECTS PER TASK SITUATION

and C-unit word count show that there was greater use of ELM in the formal situation than in most other situations. The large increase in the occurrence of edit mazes in the formal situation will explain this.

Another valuable method of analysis is that hich shows the percentages of each type of ELM to all ELM occurrences. Distinct tendencies exist in the occurrence of audible pauses and edit mazes. A decline in audible pauses across situations from informal to formal was found, as expected. The percentage occurrences of edit mazes, graphed in Figure 2, reveal a tendency for an increase in the use of edit mazes in the formal situation.

The need to be cognizant of an acceptable use of language for a formal situation might explain the results of the edit maze analysis. Even though language is formulated to an acceptable standard in the speaker's mind before being phonologically produced it seems as though some editing features can only be carried out when language is produced and can be heard by the speaker himself. In written language this process can be carried out orally before the edited version is committed to paper. In oral language, because this editing function must take place at that level, there never can be perfectly edited oral language. The increase in edit mazes then, in the formal situation, quite likely amplifies the speaker's attempts to produce a formally-acceptable style and use of language. It also reveals the train of logic that the speaker is adopting or formulating. Edit mazes seem to be less intrusive in the language samples than do other ELM types, especially audible pauses and filler words. Frequently edit mazes only differed in one way from the corrected version or restart which followed. This difference might be a change in

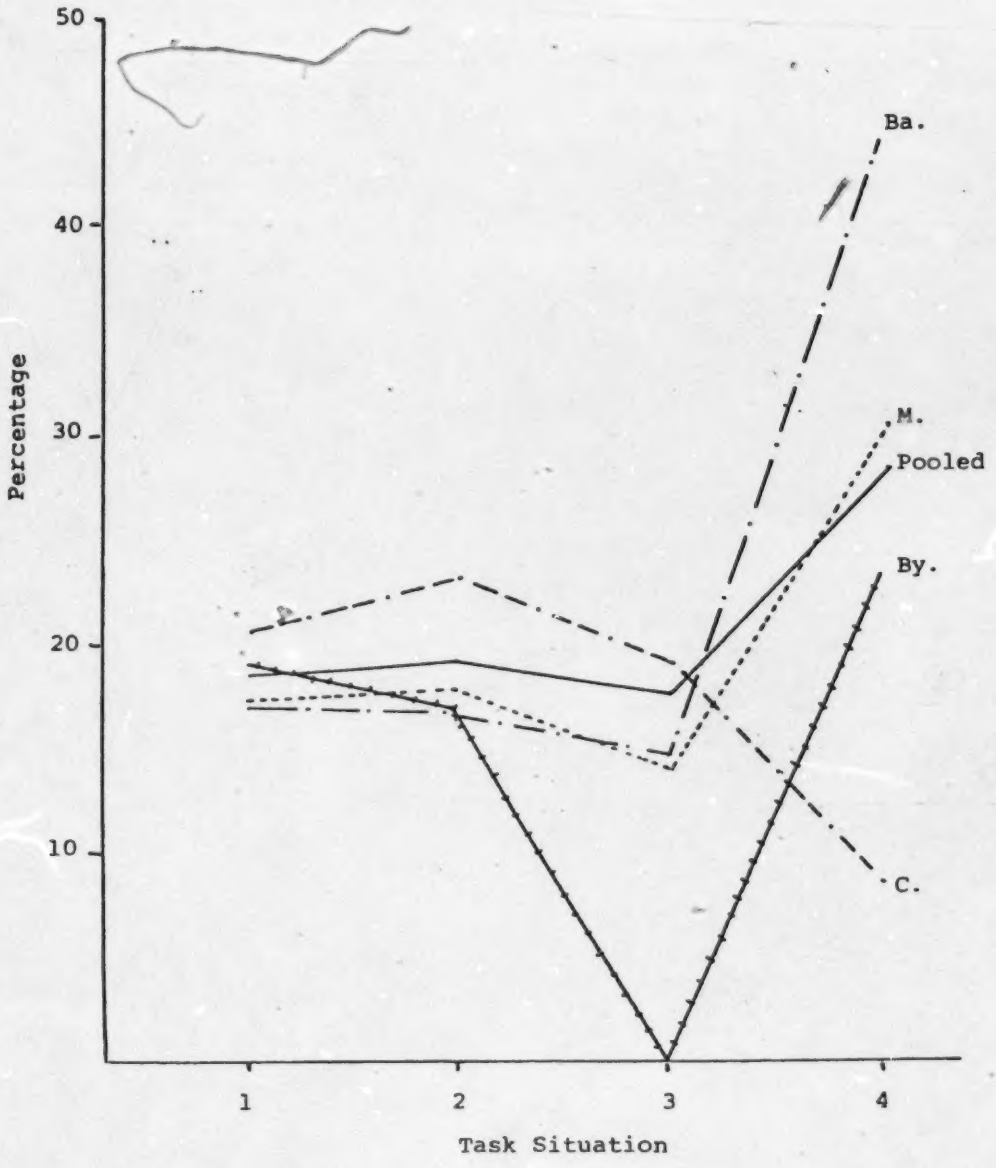

Figure 2

PERCENTAGE OF EDIT MAZES TO EXTRANEOUS LINGUISTIC MATERIAL OCCURRENCES FOR INDIVIDUAL AND POOLED KEY SUBJECTS PER TASK SITUATION

gender, from "him" to "her" or vice versa, or a change from singular to plural or vice versa.

SUMMARY

This study was by nature an exploratory one, and as such is both extensive in scope and descriptive in terms of analyzing and reporting the data. Limitations have made it necessary to curtail the description of subject matter analysis and nonlinguistic features analysis, while linguistic dominance analysis has been omitted. Likewise a full discussion of the implications of the study is not possible here.

The methodology developed and used has shown to be a useful way of describing and researching children's language use in a variety of situations. The interlinking of sociolinguistics and child language development can bring a new focus to the study of children's language. The results of many of the analyses suggest that they are useful measures which differentiate language use in different sociolinguistic situations. The implications of this study for the evaluation of children's language use areconsiderable, and the directions for further research into the sociolinguistic behaviour of children are many.

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